

Spokane Fire Weather

LOCATION:

National Weather Service Office
2601 North Rambo Road
Spokane, WA 99224-9164.

HOURS:

Office hours at WFO Spokane for Fire Weather will be as follows: Daily 24 Hour forecast coverage.

The Fire Desk is staffed daily 0700-1500 Mid March - Early November

PHONE NUMBERS and E-Mail:

Fire Weather	(509) 244-5031
Public	(509) 244-6395
FAX	(509) 244-0554

john.livingston@noaa.gov
ken.holmes@noaa.gov
ronald.miller@noaa.gov
robert.tobin@noaa.gov

STAFF:

<u>Name</u>	<u>Position</u>
John Livingston	Meteorologist in Charge
Ron Miller	Science and Operation Officer
Ken Holmes	Warning Coordination Meteorologist
Bob Tobin	Fire Weather Program Leader/IMET
Todd Carter	ITO/Forecaster/IMET
Claudia Cox	Senior Forecaster
John Fox	Senior Forecaster
Robin Fox	Senior Forecaster
Matt Fugazzi	Senior Forecaster
Paul Bos	Forecaster
Tracy Cox	Forecaster
Laurie Koch	Forecaster
Rocco Pelatti	Forecaster/IMET
John Werner	Forecaster/IMET Trainee

COMMUNICATIONS:

All forecasts and spot forecasts are input into AWIPS (Advanced Weather Integrated Processing System), WIMS, and on Spokane's Internet home page. Users who do not have access to WIMS, or Internet can still have forecasts faxed to them.

Internet Address:

<http://www.wrh.noaa.gov/otx/fire.php>

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WEATHER BRIEFINGS

Internet based weather briefings are available from the Spokane office as needed. During peak fire season, normally mid June-October briefings will be daily at 0915 PDT. During Land Management season briefings are available by customer request and are usually held twice per week for planning purposes. Phone briefings are available 24 hours per day.

FORECAST DISTRICT:

The Spokane Fire Weather Office has weather forecast responsibility for a large portion of protected lands in eastern Washington. Exceptions are the Blue Mountains area, the Yakama Indian Nation lands, the DOE Hanford Site, and Southeast Department of Natural Resources (DNR) land. These protected lands are the forecast responsibility of the National Weather Service Office Pendleton Fire Weather program.

Spokane Fire Weather's area of responsibility for Eastern Washington is divided into six districts for fire weather forecasting. In addition, these forecast districts are further subdivided into ten fire weather zones. See the map for general locations of districts and zones for eastern Washington. The weather zones are comprised of fire danger stations with similar weather and similar trends in weather changes.

WFO Spokane has forecast responsibility for Central and Northern Idaho Panhandle. This district has one (1) zone (101) covering the Idaho Panhandle National Forests, Idaho State Lands, and Coeur d'Alene Indian Agency lands.

Agencies Served:

Land management agencies served by the Spokane Fire Weather Office include:

USFS....

Colville NF

Wenatchee NF

Okanagan NF

	Idaho Panhandle NF
BLM....	Spokane District
BIA....	Colville Indian Agency Spokane Indian Agency Coeur d' Alene Indian Agency
NWR...	Turnbull National Wildlife Refuge Columbia National Wildlife Refuge Priest River National Wildlife Refuge Lake Pend Oreille Wildlife Refuge
Washington DNR...	Northeast Area Resource Protection Division
Idaho...	Department of State Lands
Other Public Agencies...	Coulee Dam National Recreation Area Lake Chelan National Recreation Area

FORECAST SERVICES:

Planning Forecasts

The issuance of planning forecasts are seasonal. Routine issuance of the morning and afternoon planning forecasts seven days a week normally begins in early spring. For 2005 it will be around Monday March 21st continuing through late October or early November. Specific start and stop dates are coordinated with customer agencies. Morning forecasts will be available at 08:30 a.m., while afternoon forecasts will be available by 3:30 p.m.

Off-season Land management forecasts will be issued between 0900-1000 Monday through Friday through the winter months. These forecasts will begin the Monday following the end of fire season, typically late October or early November.

Fire Weather Watches and Red Flag Warnings

General Fire Weather Watch and Red Flag Warning criteria continues to be under review. Until formal changes have been agreed upon by the Land Management agencies and the National Weather Service we will continue with the present criteria. Red Flag criteria for eastern Washington and Northern Idaho are as follows:

- Dry lightning and thunderstorms producing little or no precipitation (less than .10 of an inch)
- Lightning after an extended period of dry. An extended period of dry will be at the discretion of the NWS, but typically is thought of as 14 or more consecutive days without measurable precipitation.
- Sustained surface winds exceeding a 10 minute average of 15 mph combined with relative humidity less than:
 - 15% in the Columbia Basin (zone 673)
 - 25% in the mountainous areas
 - 20% in the lower valley zones

These conditions must be verified by at least 2 observation sites (RAWS, METAR, DOT, Agrimet etc) for 2 consecutive hours. **For Idaho Zone 1 the criteria will be at least 2 observations sites for any 3 hours in an 8 hour period.** When using observation sites other than RAWS sites wind speeds will be converted to 10 minute averages.

Special consideration will be given whenever very hot temperatures are combined with very low relative humidity.

- Haines Index of 6 when combined with low relative humidity, typically 15% or below.

The issuance of Red Flag Warnings will take into account fuel conditions, and will be coordinated with land management agencies and other applicable fire weather offices. Typically when 1000 hour fuels are at or below 12% and 100 hour fuels are at or below 10% and Live Fuels at or below 120%. In 2005 the NWSFO Spokane will be utilizing the NWCC dryness levels as input into the decision making process for issuing fire weather watches and red flag warnings.

Red Flag Warning Verification Points

Zone 673

- Douglas Raws, Escure Raws, Saddle Mountain Raws

Zone 676-677

- Camp Four Raws , Dry Creek Raws , Entiat Raws

Zone 686 Spokane County portion

- Wellpinit Raws , Midnight Mine Raws, Turnbull Wildlife Refuge Raws

Zones 680, 682, 685

- NCSB , Raws, Leecher Raws , Signal Peak Raws, Peoh Point Raws

Zone 684

- Nespelem Raws , Kramer Raws , Douglas Ingram Raws , Oroville Raws...*****If Kramer Raws and Oroville Raws are used to meet red flag conditions at least one other RAWS in the fire zone will need to meet the criteria for at least one hour*****

Zones 686-687

- Kettle Falls Raws , Midnite Mine Raws , Gold Mountain Raws, Deer Mt. Raws

Zone 101

- Bonners Ferry Raws, Clarkia Raws, Fish Hook Raws
Hayden lake Raws , Line Creek Raws , Nuckols Raws
Priest lake Raws , Saddle Pass Raws

*****For Idaho Zone 101 the criteria will be at least 2 observations sites for any 3 hours in an 8 hour period.*****

Spot Forecasts

Official spot forecasts will be prepared and disseminated 24 hours a day. All prescribed fire spot forecast requests **MUST BE** accompanied by a recent weather observation from the burn site. **More observations from the burn area will generally result in better spot forecasts.** Feedback is imperative to increase the accuracy of spot forecasts. **In addition valid times for spot forecasts will be twelve hours from issuance.** If a fire has a longer duration, a new spot forecast should be requested.

“Spot forecasts are available year-round to all Federal, State and Local government entities for wildfire suppression, prescribed burns (for hazardous fuel reduction), search and rescue missions, HAZMAT incidents, or for any other land management activity that directly supports federal resources or the safety of civilians and forests. Spot forecasts cannot be provided to Local and State governments for non-fire/range management activities such as spray projects, road building, tree planting, recreational events, and prescribed burns (other than for hazardous fuel reduction) that do not have the potential to escape and threaten life and property.”

NFDRS Trend Forecasts

A numerical zone trend forecast is prepared and disseminated to WIMS by 1540 each afternoon from about late May through early October. The trend forecasts are used to compute the expected NFDRS indices valid for the following day. The number of NFDRS indices forecast by the weather office depends only on the number of NFDRS

observations input into WIMS by the fire agencies. If observations are not entered into WIMS by 1500, a forecast will not be produced for the zone(s).

IMETS (Incident Meteorologists)

Spokane Fire Weather Office will have a minimum of two certified IMET'S on staff with at least one available at all times during the high summer fire season.

NON-FORECAST SERVICES:

There are several duties that fall into the non-forecast services including, but not limited to teaching assignments, customer meetings, customer consultations, preparation of annual reports, preparation of annual operating plans, program management, research and in-house training of personnel.

There is a need for advanced notice for teaching assignments, customer meetings and consultations. The NWS-NWSEO Collective Bargaining Agreement provides rules for scheduling of bargaining unit employees. NWS management has limitations regarding modification of the work schedule after it has become "fixed" without paying overtime.

All requests for teaching assignments, customers meetings and consultations will be honored provided they are scheduled more than three weeks ahead of time, and they do not conflict with other Fire Weather commitments. NWS Spokane will make every effort to fulfill requests for teaching assignments, customer meetings and consultations that are scheduled with less than three weeks lead time, or conflict with other Fire Weather commitments. Shifts will be scheduled to complete the Annual Operating Plan and other Fire Weather commitments. NWS Spokane will make every effort to fulfill requests for teaching assignments, customer meetings and consultations that are scheduled with less than three weeks lead time, or conflict with other Fire Weather commitments. Shifts will be scheduled to complete the Annual Fire Weather Operating Plan and the Annual Fire Weather Report. Program management, research and training time will be provided to ALL employees based on the needs of the office.

Fire Weather Program Leader - The NWS Spokane Fire Weather Program Leader is Bob Tobin. High primary focus will be customer outreach, training, program development, IMET dispatches, and fire weather operational shifts.

Meeting Proficiency and Currency Standards - All forecasters will complete required proficiency prior to working alone on any real time Fire Weather products and services.

FORECAST VERIFICATION

Routine verification will be made on Red Flag Warnings and Spot Forecast turnaround times. In addition selected NFDRS trend forecasts for temperature, relative humidity, and fuel moisture will be verified. Results of the verification will be published in the Fire

Weather Annual Summary. The National Weather Service will work with local fire agencies and the Pacific Northwest Coordination Group to develop a baseline for product verification.

Geographical Area Descriptions

The National Weather Service Office in Spokane has fire weather forecast responsibility for the mountains and valley areas of northern and central eastern Washington and the northern and central Idaho Panhandle. The Pendleton weather office assumes responsibility for the southern areas of eastern Washington.

The National Weather Service Office in Spokane has fire weather forecast responsibility for protected lands in the northern and central part of eastern Washington. Exceptions are the Blue Mountains area, the Yakama Indian Reservation, and the Southeast Department of Natural Resources (DNR) protected lands. Forecasts for these areas are handled out of the National Weather Service office in Pendleton (see zone descriptions below).

WFO Spokane's eastern Washington fire weather area is divided into six districts. In addition, these forecast districts are further sub-divided into ten fire weather zones. See the map for general locations of districts and zones for eastern Washington. The fire weather zones are comprised of fire danger stations with similar weather and similar trends in weather changes.

South Central District:

This district consists of two zones. Zone 676 lower elevations and Zone 680 higher elevations. The south central district covers those areas of the southern Washington Cascades north of the Yakama Indian Reservation to Mission Ridge. The district boundary also runs west to east from the Cascade crest to Interstate 82. This includes the Naches and Cle Elum Ranger Districts of the Wenatchee National Forest. This district has pronounced climate differences, from the marine air influence near the Cascade crest, to the dry arid climate of the valleys. This district has a relatively low frequency of lightning, and averages about 7-10 storm-days per season from June through September.

Central District:

This district has two zones. Zone 677 lower elevations and Zone 682 are the two zones in this district. This district extends from Mission Ridge north to the Sawtooth Ridge, and from the Cascade crest east to the Columbia River. It includes the northern part of the Wenatchee NF. Lightning frequency averages around 10-15 storm-days per season. The summer climate is similar to the South Central District, but winds tend to be stronger and more persistent, and day to day weather changes are more pronounced. This district contains some of the highest fire hazard areas in the Pacific Northwest.

Northern District:

This district has three zones. Zone 687 is the Okanogan Highland zone. Zone 684 lower elevations, mainly the Okanogan River Valley, and zone 685 higher elevations of the North Cascades. This district extends across the north part of eastern Washington from the Cascade crest to the Kettle River Ranger District on the east. It includes the Okanogan NF, the Republic Ranger district of the Colville NF, land under the protection of Northeast Department of Natural Resources, and the western and central parts of the Colville Indian Agency. The marine influence is minimal in this district compared to the south central and central districts due to its more continental location. Winds are generally lighter than central and south central districts. Lightning activity though is greater, averaging about 15 storm-days per season.

Northeast District:

Zone 686. The northeast district extends from Kettle River to the Idaho border, and south to the vicinity of Spokane. It covers the remainder of the Colville NF and Indian Agency, as well as lands under the Northeast DNR. This district is normally more moist than the other districts since it extends into the western foothills of the Rocky Mountains. The southern portion around Spokane is the drier, windier section of this district. Lightning frequency is the greatest of any of the districts averaging 15-20 storm-days per season.

Northern Columbia Basin District:

Has one zone. Zone 673. Pendleton weather office has responsibility for all Washington State DNR Southeast Region lands, Yakama IA, and DOE Hanford. The southern boundary is I-90 for that part of the Yakima Firing Center in Kittitas County then follows county lines west to east across Grant, Adams, and Whitman Counties. The western part of the district boundary is the Columbia River at the Grant County line. The northern boundary is the same as previous years following the Columbia River to the eastern Ferry County then south across the northeast part of Lincoln County to I-2 near Davenport then east to the Spokane County line. Fuels in this district consist of mainly grass and sage. Zone 673 includes the Waterville Plateau which contains low ridges and coulees'. Most of the district is at fairly low elevations between 900 and 3,000 ft...with the exception being Badger Mountain near Waterville at 4,221 feet. Due to the relatively low elevations and locations, this is the warmest and driest district. Winds in some areas can be very strong. Lightning activity is the least of the districts, averaging about 6 storm-days per season.

Northern and Central Idaho Panhandle District:

This District is part of Region 1 and has one zone. Northern and Central Idaho Panhandle Zone 101 - Northern and Central Idaho Panhandle. This zone includes...Idaho Panhandle National Forests. Coeur d'Alene Indian Agency lands, and Idaho State protected lands in the following counties: Boundary, Bonner, Kootenai, Benewah,

Shoshone, and the northern part of Latah county, where a part of the St. Joe District resides. Zone 101 is broken into three (3) separate zones the Northern zone, Central zone and Southern zone. This area averages 12-15 thunderstorm days per season.